

TMDL IMPLEMENTATION PLAN

YELLOW JACKET CREEK

Submitted by Chattahoochee-Flint RDC

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August 2, 2006

**STATE OF GEORGIA
TMDL IMPLEMENTATION PLAN
YELLOW JACKET CREEK, TROUP, COWETA AND MERIWETHER COUNTIES, GEORGIA**

Background

Yellow Jacket Creek begins south of the Town of Moreland in Coweta County, and extends in a southwesterly direction through northeast Meriwether County into Troup County where it reaches the backwaters of West Point Lake on the Chattahoochee River. The creek passes through the city limits of the City of Hogansville in northeast Troup County on its way. The watershed for Yellow Jacket Creek contains a mixture of agricultural, urban, forest and barren lands. The official water use classification for the stream is Fishing and the latest information on fecal coliform contamination indicates Yellow Jacket Creek partially supports such use. The target for the Yellow Jacket Creek watershed is 175 cfu/100 ml.

The TMDL is the total amount of pollutant that can be assimilated by the receiving water body while achieving water quality standards. Section 303(d) of the Federal Clean Water Act and EPA's Water Quality Planning and Management Regulations (40 CFR Part 130) require states to develop total daily maximum load (TMDL) management plans for the water bodies that do not meet designated uses under technology-based controls for pollution. The TMDL process establishes the allowable loadings of pollutants or other quantifiable parameters for a water body based on the relationship between pollution sources and in-stream water quality conditions, so that states can establish water-quality based controls to reduce pollution from both point and nonpoint sources and restore and maintain the quality of their water resources (USEPA, 1991). For bacteria such as fecal coliform, loads are expressed in terms of cells per 100ml of water.

A general implementation plan outlining mitigating activities to be established in the Yellow Jacket Creek watershed is included in this document. The purpose of this plan is to reduce or eliminate the pollutants contained in the runoff into Yellow Jacket Creek. The implementation plan will be carried out with full participation of all interested parties. The implementation plan is to be considered a living document. In the process of carrying out the plans additional water quality data will be generated and the results will be integrated into the plans. Load capacity will be adjusted, for example, if new data indicates that the targets used are not appropriate or if new standards are adopted.

Existing TMDL and Monitoring Data

The source of data used for the development of this plan was the TMDL document. The levels indicated in the TMDL document are based on a model run for 1987 and 1988 critical time periods using 'calibrated' fecal and flow parameters. The representative critical summer time period used was May through October 1987 and the representative critical winter time period was November 1987 through April 1988. This model resulted in a summer fecal coliform 30 day geometric mean of ~230 cfu/100ml. This is 55 cfu/100ml above the target level of 175 cfu/100ml.

More data is needed to identify sources of nonpoint pollution within the watershed. Local expertise and involvement from environmental agencies, federal agencies, schools and universities, and other sources will play a critical role in identifying and reducing the levels of fecal coliform in Yellow Jacket Creek.

Land Use

The Yellow Jacket watershed encompasses 88.9 square miles within the greater Chattahoochee River basin. The computer model establishing TMDL limits for fecal coliform in Yellow Jacket Creek uses the following land use allocations within the watershed: Agriculture 20%, Urban 4%, Forest 75%, and Barren lands 1%.

Both point and nonpoint sources may contribute fecal coliform to a water body. Potential sources of fecal coliform are numerous, and often occur in combination. Poorly treated municipal sewage comprises a major source of fecal coliform. Rural storm water runoff can transport significant loads of fecal coliform from livestock pastures and animal feedlots. Wildlife can also contribute fecal coliform. Most sources of fecal coliform loads can be assigned to two broad classes of loading: point sources and nonpoint sources.

For point sources, the greatest potential source of human fecal coliform is raw sewage. Raw sewage, while usually not discharged intentionally, may reach water bodies through leaks in sanitary sewer systems and for a few communities in Georgia through discharges from combined sewer overflows (CSOs).

Potential nonpoint sources of fecal coliform are numerous and often occur in combination. This is particularly true within the Yellow Jacket Creek watershed because land use includes both urban and rural practices.

In urban or suburban settings with high amounts of paved or covered areas, important nonpoint sources of loading are surface storm flow, failing septic tanks, and leakage of sanitary sewer systems.

In rural settings, the relative amounts of paved or covered area is usually much lower, and sources of fecal coliform may include diffuse runoff of animal wastes associated with the erosion of sediments, runoff from concentrated animal operations, and failing septic tanks.

The greatest rural nonpoint sources of fecal coliform are generally associated with animal operations, in which large quantities of fecal matter are generated. Land application of municipal waste sludge may also be a significant source of fecal coliform load. Even without these sources, some fecal coliform can be expected owing to the presence of domestic and wild animals in the watershed.

Nonpoint sources associated with barren land use include pollutants due to illicit trash and hazardous waste dumping.

Existing Regulatory or Voluntary Action

Georgia is in the process of implementing a watershed approach to water resource management through the River Basin Management Planning. River basin planning is the foundation for implementation of water protection strategies in Georgia. This approach provides the framework and schedule for actions to address the waters of Georgia 303 (d) list. The basin planning program is based on legislation in 1992 (O.C.G.A. 12-5-520) by the Georgia Assembly that calls for EPD to develop river basin management plans for each of the major river basins in Georgia. The Chattahoochee River Basin Management Plan was adopted in 1997.

FOR ALL JURISDICTIONS

The Georgia Forestry Commission and the Natural Resource Conservation Service have established Best Management Practices (BMPs) for various activities such as forestry, agriculture, and soil disturbance. These are being distributed to interested and affected individuals and organizations on an on-going basis.

FOR TROUP COUNTY

A wetlands protection district and groundwater protection district have been added as zoning overlays that are intended to protect water quality by restricting land uses within designated wetlands and groundwater recharge areas, respectively.

Subdivision regulations within the unincorporated county require site plan approval and mitigation for erosion during construction.

FOR CITY OF HOGANSVILLE WITHIN TROUP COUNTY

The Flood Damage Protection Ordinance was adopted as part of the county's participation in the national flood hazard mitigation program.

A watershed protection ordinance has been added as a zoning overlay which is intended to protect water quality by restricting land uses within designated watersheds.

The community has adopted the state model soil erosion and sediment control ordinance which regulates land disturbing activities.

FOR COWETA COUNTY

The Georgia Adopt-A-Stream program maintains four underlying principles: to increase public awareness of the state's nonpoint source pollution and water quality issues, to provide citizens with tools and training to evaluate and protect their local waterways, to encourage partnerships between citizens and their local governments, and to collect quality baseline water quality data. The Georgia Adopt-A-Stream program has been a successful program in Coweta County.

The Stream Corridor Protection District is an overlay to the county's zoning ordinance designed to assure that significant streams in the county will not become polluted and unsuitable as sources of potable water.

The Flood Damage Protection Ordinance was adopted as part of the county's participation in the national flood hazard mitigation program. The ordinance specifically states that, "Agricultural practices shall not impair the drinking quality of the water as defined in the Federal Clean Drinking Water Act."

FOR MERIWETHER COUNTY

The Flood Damage Protection Ordinance was adopted as part of the county's participation in the national flood hazard mitigation program and regulates land uses in designated flood hazard areas.

Recommended Regulatory or Voluntary Actions

Implementation of measures to address the TMDL involves the cooperation of all landowners and land users in the watershed. Broad awareness and involvement are essential to the success of the implementation plan. Through careful land use planning and the use of best management practices, the impacts of storm water runoff can be minimized. Storm water runoff can be improved through methods like erosion control and the establishment of green spaces, parklands and stream buffers.

FOR ALL JURISDICTIONS

Amend the flood hazard protection ordinances to include language that state, "Land use practices shall not impair the drinking quality of the water as defined in the Federal Clean Drinking Water Act". FY 2001

Enforce the new revisions to the State of Georgia's National Pollutant Discharge Elimination System (NPDES) permit. FY 2001

Amend the soil erosion ordinances to include the recommendations of the Erosion and Sedimentation control Technical Study Committee (DIRT II). FY 2002

Expand the Nutrient Management Plans being developed through the various county extension offices to include fecal coliform reduction as a targeted effort. FY 2002

Implementation Plan Schedule

The Implementation Plan for Yellow Jacket Creek Watershed contains a work plan outlining the tasks to be accomplished during Phase I of the program (years 1 through 5).

A stakeholder group for Yellow Jacket Creek Watershed has been identified. During the first year, this group will meet and determine how it will function to best achieve its goals. The stakeholders group must work together to identify additional remedial measures and sources of funding needed for their implementation. A management programs to implement BMPs must be established and implemented during this first year. Educational programs focused at schools, interest groups and landowners will be developed and implemented during the first year. Monitoring and status reports of fecal coliform levels will be implemented during the first year. Work will also begin on detecting and eliminating any illicit discharges.

After the first year, work will continue throughout Phase I in the following areas: implementing and educational and outreach programs, detecting and eliminating illicit discharges, evaluation of additional management controls, monitoring and evaluating progress, and providing period progress reports. If the fecal coliform levels remain above the targeted level during the fourth year of the plan, the process to develop a more stringent Phase II plan should begin during the fourth year. The projected attainment date is ten years from the acceptance of this implementation plan by the EPD.

Monitoring Plan

Monitoring is a critical component in determining the success of the implementation plan. Monitoring helps assess compliance with regulations, major sources of loading and the affect of regulatory and voluntary measures implemented in the drainage basin. No two watersheds are alike. Therefore, in determining actual fecal coliform levels, it is essential to rely on monitoring of particular watersheds rather on computer modeling.

The monitoring schedule consists of annual and as needed site specific testing of the Yellow Jacket Creek watershed for fecal coliform. These tests will be conducted at a minimum by the three respective county Health Departments and the various water and sewer utility providers within the watershed.

Criteria to Determine Progress

Progress in meeting the goals of the Implementation Plan will be determined through analysis of water quality sampling results. Periodic monitoring will show the trends of fecal coliform levels throughout the five-year period. The number of regulatory controls or best management practices implemented in the Yellow Jacket Creek Watershed will also serve as a measure of progress. The implementation plan will be considered successful if the TMDL level for Yellow Jacket Creek meets the target TMDL level and the stream is removed from the 303 (d) list.

Conclusion

The development and implementation of an effective TMDL plan is critical to the environmental health of Troup, Coweta and Meriwether Counties. Removal of Yellow Jacket Creek from the 303 (d) list and compliance with the Federal Clean Water Act is in the best possible environmental and economic interest of these counties. Without the success of the TMDL Implementation Plan

the counties and their affected cities could face difficulty in areas such as the expansion or development of wastewater treatment facilities and the location of industries that may contribute to increased levels of fecal coliform.

Success will be achieved through the continued enforcement of existing regulatory measures as well as the implementation of new measures. In addition, new, existing, and expanded voluntary measures will play a key role in achieving the ultimate goal. If fecal coliform levels in Yellow Jacket Creek have not reached acceptable levels at the completion of the first five year period, a second phase of implementation will be developed.

STATE OF GEORGIA

TMDL IMPLEMENTATION PLAN FOR: Yellow Jacket Creek
(STREAM)Fecal coliform
(PARAMETER)RIVER BASIN: Chattahoochee
PLAN DATE: March 31, 2001

| | | | | | | | |
|---|--|---|--------------------------------------|-------|----|--------|-------|
| Prepared by: Chattahoochee-Flint Regional Development Center Address: 13273 GA Hwy 34 E, P.O. Box 1600 City: Franklin State: GA Zip: 30217-1600 e-mail: Inicholas@cfrdc.org | | Or Prepared By: Address: _____ City: _____ State: _____ Zip: _____ e-mail: _____ | | | | | |
| Date Submitted to EPD: 03-29-01 | | Date Submitted to EPD: _____ | | | | | |
| General Information Obtain this information from the TMDL document or other information. When completed, this document will be a self-contained report independent of the TMDL document. | | Significant Stakeholders Local governments, agricultural organizations or significant land holders, commercial forestry organizations, businesses and industries, and local organizations including environmental groups with a major interest in this water body. | | | | | |
| TMDL ID (to be entered by EPD) | | Name/Organization | Troup County | | | | |
| Water body name | Yellow Jacket Creek | Address | PO Box 1149 | | | | |
| HUC basin name | Yellow Jacket Creek | City | LaGrange | State | GA | Zip | 30214 |
| HUC number | 0313000207 | Phone | 706-883-1610 | | | e-mail | |
| Primary county | Troup | Name/Organization | Troup County Cattleman's Association | | | | |
| Secondary county | Coweta / Meriwether | Address | 207 N Lewis St | | | | |
| Primary RDC | Chattahoochee-Flint | City | LaGrange | State | GA | Zip | 30240 |
| Secondary RDC | | Phone | 706-882-5561 | | | e-mail | |
| Water body location | Troup County | Name/Organization | Two Rivers RC&D | | | | |
| | | Address | 900 Dallis St | | | | |
| Miles or area impacted | 5 | City | LaGrange | State | GA | Zip | 30240 |
| Parameter addressed in plan | Fecal coliform bacteria | Phone | 706-885-0101 | | | e-mail | |
| Water use classification | Fishing | Name/Organization | Meriwether County | | | | |
| Degree of impairment | Partially supporting use <input checked="" type="checkbox"/> | Address | PO Box 428 | | | | |
| | Not supporting use <input type="checkbox"/> | City | Greenville | State | GA | Zip | 30222 |
| Date TMDL approved by EPA | | Phone | 706-672-1314 | | | e-mail | |
| Impairment due to | Point sources <input type="checkbox"/> | Name/Organization | Coweta County | | | | |
| | Nonpoint sources <input checked="" type="checkbox"/> | Address | 22 East Broad Street | | | | |
| | Both <input type="checkbox"/> | City | Newnan | State | GA | Zip | 30236 |
| Point source-Form A; Nonpoint source-Form B; Both-Form A+B+C | | Phone | 770-254-2601 | | | e-mail | |

Stakeholders continued on last page

SUMMARY OF ALLOCATION MODEL RESULTS FROM TMDL DOCUMENT (existing load, target TMDL, and needed reduction)

| EXISTING LOAD | TARGET TMDL | NEEDED REDUCTION |
|----------------|----------------|------------------|
| 230 cfu/100 ml | 175 cfu/100 ml | 55 cfu/100 ml |

I. IDENTIFY NONPOINT SOURCE CATEGORIES AND SUBCATEGORIES OR INDIVIDUAL SOURCES WHICH MUST BE CONTROLLED TO IMPLEMENT LOAD ALLOCATIONS:

List major nonpoint sources contributing to impairment including those identified in TMDL document.

| SOURCE | DESCRIPTION OF CONTRIBUTION TO IMPAIRMENT | RECOMMENDED LOAD REDUCTION (FROM TMDL) |
|----------------------------------|--|--|
| Agriculture or pasture land uses | 100% contribution to the impairment. Important loads are associated with animal operations in which large quantities of fecal mater are generated or spread on fields. Loads may also be associated with the land application of municipal sludge. | 20% |

II. DESCRIBE ANY REGULATORY OR VOLUNTARY ACTIONS INCLUDING MANAGEMENT MEASURES OR OTHER CONTROLS BY GOVERNMENTS OR INDIVIDUALS THAT SPECIFICALLY APPLY TO THE POLLUTANT AND THE WATERBODY FOR WHICH THE TMDL WAS WRITTEN, THAT WILL BE ACCOMPLISHED THROUGH RELIABLE AND EFFECTIVE DELIVERY MECHANISMS, AND THAT WILL HELP ACHIEVE THE LOAD ALLOCATIONS IN THE TMDL:

A. Existing or required regulatory actions

| RESPONSIBLE GOVERNMENT, ORGANIZATION OR ENTITY | NAME OF REGULATION/ORDINANCE | DESCRIPTION | ENACTED / PROJECTED DATE | STATUS |
|---|--|---|---------------------------------|---------------|
| Troup County | Wetlands Protection District | Protects water quality. Restricts land use within wetlands | 05-00 | Enforced |
| Troup County | Groundwater Recharge Protection District | Regulates land use within district | 05-00 | Enforced |
| Troup County | Subdivision Regulations | Requires site plan and mitigation for erosion during construction | 05-00 | Enforced |
| Coweta County | Stream Corridor Protection District | Too assure that significant streams in the county will not become polluted and unsuitable as sources of potable water. | 1990 | Enforced |
| Coweta County | Flood Damage Protection Ordinance | States " Agricultural practices shall not impair the drinking quality of the water as defined in the Federal Clean Drinking Water Act". | 1990 | Enforced |
| Meriwether County | Flood Hazard District | Regulates land use in flood hazard areas | | Enforced |
| City of Hogansville | Watershed Protection Ordinance | | 1993 | Enforced |
| City of Hogansville | Flood Damage Ordinance | Regulates land use in flood hazard areas | 2000 | Enforced |
| City of Hogansville | Soil Erosion Control Ordinance | | 1998 | Enforced |
| City of Grantville | Watershed Protection Overlay | Regulates land use, requires maintenance of natural buffer and runoff and drainage control measures | 1998 | Enforced |

B. Existing voluntary actions

| RESPONSIBLE ORGANIZATION OR ENTITY | NAME OF ACTION | DESCRIPTION | ENACTED / PROJECTED DATE | STATUS |
|---|--|---|---------------------------------|---------------|
| Georgia Forestry Commission | BMP's for forestry | Disseminating information to interested individuals and organizations | | Ongoing |
| National Resource Conservation Service | BMP's for agriculture | Disseminating information to interested individuals and organizations | | Ongoing |
| National Resource Conservation Service | BMP's for Erosion and Sediment Control | Disseminating information to interested individuals and organizations | | Ongoing |

C. Additional recommended regulatory or other measures that should be implemented to reduce the loads of the TMDL parameter

| ENTITY/ORGANIZATION RESPONSIBLE | NAME OF PROPOSED REGULATION/ORDINANCE/ OTHER | DESCRIPTION | ENACTED / PROJECTED DATE | STATUS |
|---|---|---|---------------------------------|---------------|
| Meriwether County | Amendment to Flood Hazard District | Include language " Land use practices shall not impair the drinking quality of the water as defined in the Federal Clean Drinking Water Act". | | Under study |
| Troup County | NPDES Permit | Amend soil erosion and storm water ordinances to implement state NPDES requirements | 08-00 | Ongoing |
| Meriwether County | NPDES Permit | Amend soil erosion and storm water ordinances to implement state NPDES requirements | | |
| Coweta County | NPDES Permit | Amend soil erosion and storm water ordinances to implement state NPDES requirements | 08-00 | Ongoing |
| City of Hogansville | NPDES Permit | Amend soil erosion and storm water ordinances to implement state NPDES requirements | 08-00 | Ongoing |
| Town of Lone Oak | NPDES Permit | Amend soil erosion and storm water ordinances to implement state NPDES requirements | 08-00 | Ongoing |
| Troup County | Amend Soil Erosion Ordinance | Include recommendations of the Erosion and Sedimentation Control Technical Study Committee (DIRT II) | 06-02 | Under review |
| Meriwether County | Amend Soil Erosion Ordinance | Include recommendations of the Erosion and Sedimentation Control Technical Study Committee (DIRT II) | 06-02 | Under review |
| Coweta County | Amend Soil Erosion Ordinance | Include recommendations of the Erosion and Sedimentation Control Technical Study Committee (DIRT II) | 06-02 | Under review |
| City of Hogansville | Amend Soil Erosion Ordinance | Include recommendations of the Erosion and Sedimentation Control Technical Study Committee (DIRT II) | 06-02 | Under review |
| Town of Lone Oak | Amend Soil Erosion Ordinance | Include recommendations of the Erosion and Sedimentation Control Technical Study Committee (DIRT II) | 06-02 | Under review |
| Troup County Cooperative Extension Service | Nutrient Management Plans | Expand the program to include fecal coliform reduction | 09-02 | Under study |
| Meriwether County Cooperative Extension Service | Nutrient Management Plans | Expand the program to include fecal coliform reduction | 09-02 | Under study |
| Coweta County Cooperative Extension Service | Nutrient Management Plans | Expand the program to include fecal coliform reduction | 09-02 | Under study |

III. SCHEDULE FOR IMPLEMENTING MANAGEMENT MEASURES OR OTHER CONTROL ACTIONS:

These must be implemented as expeditiously as practicable within five years of when the implementation plan is accepted by EPA.

| IMPLEMENTATION ACTION* | YEAR 1 | YEAR 2 | YEAR 3 | YEAR 4 | YEAR 5 |
|--|--------|--------|--------|--------|--------|
| Form stakeholders group | X | | | | |
| Organize implementation work with stakeholders and local officials to identify remedial measures and potential funding sources | X | | | | |
| Identify sources of TMDL parameter | X | | | | |
| Develop management programs to control runoff including identification and implementation of BMPs (Phase I): | | | | | |
| Agriculture | X | | | | |
| Forestry | | | | | |
| Urban | | | | | |
| Mining | | | | | |
| Organize and implement education and outreach programs | X | X | X | X | X |
| Detect and eliminate illicit discharges | X | X | X | X | X |
| Evaluate additional management controls needed | X | X | X | X | X |
| Monitor and evaluate results | X | X | X | X | X |
| Reassess TMDL allocations | | X | X | X | X |
| Provide periodic status reports on implementation of remedial activities | X | X | X | X | X |
| If needed, begin process for Phase II (next 5 years) and subsequent phases | | | | X | X |
| * This schedule may be revised after meeting with the regional Water Issues Committee and stakeholders | | | | | |

IV. PROJECTED ATTAINMENT DATE AND BASIS FOR THAT PROJECTION:

The projected attainment date is 10 years from acceptance of the implementation plan by EPA.

V. MEASURABLE MILESTONES:

- Number of management controls and activities already implemented 13
- Number of management controls and activities proposed in five-year work program 14
- Number of management controls and activities actually implemented in five-year work period _____(to be completed after 5 years)
- Stream sampled to identify areas of concern See monitoring plan

VI. MONITORING PLAN:

Monitoring data that placed stream on 303(d) list will be provided if requested.

Previous or current sampling activities or other surveys done to detect sources or to measure effectiveness of management measures or other controls.

| ORGANIZATION | TIME FRAME | PARAMETERS | PURPOSE | STATUS |
|------------------------------------|------------|----------------|----------------------|----------|
| West GA Watershed Assesment | 2000-2003 | Fecal coliform | Watershed Assessment | On-going |
| Coweta County Water and Sewer Dept | Annual | Fecal coliform | Water Quality | On-going |
| City of Hogansville | Annual | Fecal coliform | Water Quality | On-going |

Planned or proposed sampling activities or other surveys.

| ORGANIZATION | TIME FRAME | PARAMETERS | PURPOSE | STATUS |
|--------------|------------|------------|----------------|----------|
| EPD | 2001 | Multiple | Basin planning | On-going |
| | | | | |

VII. CRITERIA TO DETERMINE WHETHER SUBSTANTIAL PROGRESS IS BEING MADE:

- % concentration or load change (monitoring program)
- Categorical change in classification of the stream (delisting the stream is the goal)
- Regulatory controls or activities installed (ordinances, laws)
 - Best management practices installed (agricultural, forestry, urban)

COMMENTS

___Additional Stakeholders:_____

___City of Hogansville, 400 East Main Street, Hogansville, GA, 30230, 706-637-4813_____

___Town of Lone Oak, PO Box 627, Hogansville, GA, 30230, 706-637-8056_____

___Coweta County Cattleman's Association PO Box 819, Newnan, GA 30264 770-927-6431_____

___Coweta County Extension Service (Adopt-a-Stream Program) PO Box 819, Newnan, GA 30264, 770-254-2620_____
